UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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June 6, 2011

Mark Lewis, Superintendent
Biscayne National Park
9700 S.W. 328th Street
Homestead, Florida 33034-3346

SUBJECT: Final Programmatic Environmental Impact Statement for the Coral Reef Restoration Plan at Biscayne National Park in Homestead, Florida; CEQ Number 20110133

Dear Mr. Lewis:

The U.S. Environmental Protection Agency (EPA) has reviewed the referenced Final Coral Reef Restoration Plan (Plan)/Programmatic Environmental Impact Statement (FPEIS) in accordance with its responsibilities under Section 309 of the Clean Air Act and Section 102(2)(C) of the National Environmental Policy Act (NEPA). The Plan/FPEIS provides a systematic approach for addressing injuries to coral reefs caused by vessel groundings within Biscayne National Park (BNP) in Homestead, Florida. The National Park Service (NPS) is the lead federal agency for the proposed action.

The FPEIS assesses the environmental impacts of two alternatives. Alternative 1 (no action) would not change the existing approach to coral reef restoration planning and implementation. Restoration planning and implementation would occur for each vessel-grounding incident, and the impacts of the selected actions would be assessed at that time. Alternative 2 allows for selection of the most appropriate restoration actions and specific methods from a "toolbox" of methods that have already had their impact evaluated programmatically. The toolbox of available restoration methods analyzed in the FPEIS are: 1) no active restoration/no monitoring; 2) monitoring only; 3) reattach biota; 4) biological seeding; 5) abate fuel/chemical spills; 6) remove bottom paint/fouling substance from reef; 7) seal fractures; 8) stabilize displaced substrate; 9) stabilize displaced substrate with artificial structures; 10) stabilize rubble; and 11) rubble removal from injury site. Alternative 2 is identified as the NPS preferred alternative.

EPA agrees with the purpose and need for this project provided that good decisions are made by NPS biologists. EPA supports the NPS goal of substantially reducing the planning period (time-lag) between the initial injury and the commencement of restoration activities by analyzing issues up-front programmatically. Ultimately this should lead to grounding sites being restored within a shorter timeframe than under the no action alternative. Overall impacts of the

various restoration methods do not appear to be **significant** at the programmatic or site-specific stage, especially compared to the overall benefits of coral restoration. EPA defers to NPS biologists as to what methods are best for a given coral injury. As a restoration project, the benefits outweigh any "impacts" – which appear to be minimal and short-term.

Recommendations: EPA offers the following comments. Reef restoration is a combination of art and science with a need to have experienced people in charge of development, implementing, overseeing, and evaluating success of coral reef restoration. When there is the need to restore a damaged coral site, scientists currently evaluate the situation and pick the best suite of restoration options available for any individual site. The FPEIS describes the restoration methods that would be available for selection in the event of an injury. EPA does not disagree with the streamlined approach proposed by NPS, however, approval of the FPEIS should not result in a process that lends itself to skipping important planning/consultation steps towards selection of a preferred restoration option. EPA recommends that NPS provide a thorough description of the process that NPS would follow under the preferred alternative.

According to the literature, global health of corals seems to be declining from coastal nutrients and climate change. If the basic health of the BNP coral communities is affected, this may affect the selection of a specific restoration action. EPA recommends that NPS address the present health of BNP coral communities, especially related to diseases that may be induced by climate change or coastal nutrient pollutants.

The NPS should consider ways to prevent vessel groundings and thereby reduce the need for restoration. The inclusion of active prevention measures ultimately leading to avoidance of the coral injury should be part of any programmatic coral reef protection and restoration plan. Specific prevention options include marking reef areas with signs or mooring buoys that will prevent anchor damage and may provide a visual cue to avoid the areas and prevent groundings in the absence of signs. Additional signage options might include establishment of marine markers designating specific coral restoration sites (particularly special sites for threatened and endangered species). Public outreach and educational preventative measures could include development of marine maps and other guidance (e.g., brochures depicting markers) provided by BNP, and short and free training sessions for boating visitors on methods to avoid coral injury. Administrative measures might include additional penalties levied by BNP for vessel groundings beyond Florida law, and penalty waivers for self-reporting of groundings to allow for their restoration (since many groundings are not reported). EPA recommends that the NPS should include prevention as part of the preferred alternative.

A key component of any management plan, especially a restoration plan, is the inclusion of specific performance standards. Monitoring is included as part of the preferred alternative to identify the quantity and quality of recovery at grounding sites. However, in order to measure success, restoration should be assessed by performance standards. EPA recommends specific performance criteria, potentially tailored to each restoration method, to determine the efficacy of each restoration option and/or project be considered.

Related to monitoring and performance assessment is the issue of whether restoration management actions will be restricted to those currently included in the "toolbox". If a new technology becomes available that is not currently included in the toolbox EPA recommends scientists be encouraged to use new, innovative approaches to reef restoration. Therefore, EPA recommends that a discussion of the process for consideration of newly developed restoration alternatives under an adaptive management protocol be explored.

A number of mitigation measures, including best management practices (BMP), are proposed to avoid or minimize potentially adverse impacts from implementation of any of the proposed restoration actions. EPA supports inclusion of diver BMPs that serve to minimize the generation of turbidity and any spillage of fuels from dive vessels. Additionally, vessels must avoid anchoring on corals or their own grounding, which would further injure corals and other live bottoms. It is well known that coral colonies require certain light levels and minimal inundation by sediment. Therefore, minimizing the generation of turbidity and sedimentation during restoration work will be critical. Anti-fouling paints should be removed from a grounding site carefully and as soon as possible. EPA recommends that all mitigation measures and monitoring programs be fully implemented.

Conclusion: In summary, EPA supports the NPS restoration plan proposed for BNP and defers to NPS biologists regarding its implementation to select appropriate methods for specific coral injuries. EPA recommends that all restoration work be monitored and guided by performance standards to measure success, as well as to determine the need for adaptive management which could include selection of another type of restoration method. Diver restoration work should use BMPs that minimize the generation of turbidity due to coral requirements for minimum light levels and minimal sediment inundation. The NPS should also address the present health of BNP coral communities (especially diseases that may be induced by climate change and coastal nutrient pollutants) and methods to reduce/prevent vessel groundings within the BNP so that future coral restoration (which is a long-term and expensive process) would be reduced and simplified.

We support the proposed project and have not identified any potential environmental impacts requiring substantive changes to the preferred alternative. Please contact Ken Clark at (404) 562-8282 if you have any questions or want to discuss our comments.

Sincerely,

Heinz J. Mueller, Chief
NEPA Program Office
Office of Policy and Management